

Sheet 1 of 1

**Examiner: S. Ziska**

## 1449



FORM PTO-1449 (Modified)  
LIST OF PATENTS AND PUBLICATIONS  
FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)  
Sheet 1 of 1

In the Application of

Kucherlapati et al.

Serial No. 07/922,649

Filed: 7/30/92

Art Unit: 1804

Examiner: S. Ziska

U.S. PATENT DOCUMENTS

<u>Ref. Desig.</u>	<u>Examiner's Initials</u>	<u>Document Number</u>	<u>Date</u>	<u>Name</u>	<u>Class/Subclass</u>	(If appropriate) <u>Filing Date</u>
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FOREIGN PATENT DOCUMENTS

<u>Ref. Desig.</u>	<u>Examiner's Initials</u>	<u>Document Number</u>	<u>Date</u>	<u>Country</u>	<u>Class/Subclass</u>	(If appropriate) <u>Filing Date</u>
	<u>S-27</u>	WO 92/03918	19 March 1992	PCT		
		WO 90/04036	19 April 1990	PCT		
		322240	28 June 1989	EPO		

Examiner:

S-27

Date Considered:

7/31/97

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.



FORM PTO-1449 (Modified)  
LIST OF PATENTS AND PUBLICATIONS  
FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT  
(Use several sheets if necessary)

Sheet 2 of 2

In the Application of

Kucherlapati et al.

Serial No. 07/922,649

Art Unit: 1804

Filed: 7/30/92

Examiner: S. Ziska

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
1.	SEB	Thomas et al.; Cell, Vol. 51:503-512 (1987); Site-Directed Mutagenesis by Gene Targeting in Mouse Embryo-Derived Stem Cells
2.		Koller et al.; Proc. Natl. Acad. Sci. USA, Vol 86:8932-8935 (1989); Inactivating the $\beta_2$ -microglobulin locus in mouse embryonic stem cells by homologous recombination
3.		Berman et al.; EMBO Journal, 7(3):727-738 (1988); Content and Organization of the human Ig V <sub>H</sub> locus: definition of three new V <sub>H</sub> families and linkage to the Ig C <sub>H</sub> locus
4.		Burke et al.; Science, 236:806-812 (1987); Cloning of Large Segments of Exogenous DNA into Yeast by Means of Artificial Chromosome Vectors
5.		Garza et al.; Science 246:641-646 (1989); Mapping the Drosophila Genome with Yeast Artificial Chromosomes
6.		Brownstein et al.; Science 244:1348-1351 (1989); Isolation of Single-Copy Human Genes from a Library of Yeast Artificial Chromosome Clones
7.		Sakano et al.; Nature 290:562-565 (1981); Identification and Nucleotide Sequence of a Diversity DNA Segment (D) of Immunoglobulin Heavy-Chain Genes
8.		Tucker et al.; Proc. Natl. Acad. Sci. USA 78(12):7684-7688 (1981); Mouse IgA Heavy Chain Gene Sequence: Implications for Evolution of Immunoglobulin Hinge Exons
9.		Blankenstein and Kruwink; Eur. J. Immunol. 17:1351-1357 (1987)

Examiner:

*S. Ziska*

Date Considered: 7/31/92

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Sheet 3 of 3

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|-----|----|---|
| 10. | SE | Joyner et al.; Nature 338:153-155 (1989)  |
| 11. |    | Traver et al.; Proc. Nat. Acad. Sci. USA 86:5898-5902 (1989)  |
| 12. |    | Panchis et al. Proc. Nat. Acad. Sci. USA 87:5109-5113 (1990)  |
| 16. |    | Bruggemann et al.; Proc. Natl. Acad. Sci. USA 86:6709-6713 (1989); A Repertoire of Monoclonal antibodies with Human Heavy Chains from Transgenic Mice         |
| 17. |    | Buttin G.; Trends in Genetics 3(8):205-206 (1987); Exogenous Ig Gene Rearrangment in Transgenic Mice: A New Strategy for Human Monoclonal Antibody Production |
| 18. |    | Yancopoulos et al.; Science 241 1581-1583 (1988); Reconstruction of an Immune System  |

*John*

7/31/92

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FORM PTO-1449		U.S. Department of Commerce		ATTY. DOCKET NO. A 55172-2/BIR		SERIAL NO. 07/919,297	
<b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)				APPLICANT Kucherlapati and Jacobovits			
				FILING DATE July 24, 1992		GROUP 1804	
U.S. PATENT DOCUMENTS							
Examiner Initial					DATE	NAME	Class
FOREIGN PATENT DOCUMENTS							
OTHER PRIOR ART (including Author, Title, Date, Pertinant pages, etc)							
598	AA	Thomas and Capecchi (1987) Cell 51:503-512.					
	AB	Pachnis, et al. (1990) P.N.A.S. 87:5109-5113.					
	AC	Traver, et al. (1989) P.N.A.S. 86:5898-5902.					
	AD	Joyner, et al. (1989) Nature 338:153-155.					
	AE	Blankenstein and Kruwinkel (1987) Eur. J. Imm. 17:1351-1357.					
	AF	Tucker, et al. (1981) P.N.A.S. 78:7684-7688.					
	AG	Sakano, et al. (1981) Nature 290:562-565.					
	AH	Brownstein, et al. (1989) Science 244:1348-1351.					
	AI	Garza, et al. (1989) Science 246:641-646.					
	AJ	Burke, et al. (1987) Science 236:806-812.					
	AK	Berman, et al. (1988) EMBO J. 7:727-738.					
↓	AL	Koller and Smithies (1989) P.N.A.S. 86:8932-8935.					
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EXAMINER				DATE CONSIDERED			
				2/31/92			
EXAMINER: Initial if references considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant							



FORM PTO-1449 (Modified)  
LIST OF PATENTS AND PUBLICATIONS  
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(Use several sheets if necessary)

Sheet 1 of 5

In the Application for  
R. KUCHERLAPATI, ET AL.

Serial No. 08/031,801

Filed: 15 March 1993

Art Unit: Unknown

Examiner: Unknown

U.S. PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/Subclass	(If appropriate) Filing Date
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FOREIGN PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/Subclass	(If appropriate) Filing Date
AA		WO 91/10741		PCT		

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
AB	<u>SCJ</u>	Thomas, et al., "Site-Directed Mutagenesis by Gene Targeting in Mouse Embryo-Derived Stem Cells" (1987) <i>Cell</i> 51:503-512.
AC	<u>✓</u>	Koller, et al., "Inactivating the $\beta_2$ -microglobulin locus in mouse embryonic stem cells by homologous recombination" (1989) <i>Proc. Nat'l. Acad. Sci.</i> 86:8932-8935.

Examiner: A. J. [Signature]

Date Considered: 7/31/97

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.



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Sheet 2 of 5

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R. KUCHERLAPATI, ET AL.

Serial No. 08/031,801

Filed: 15 March 1993

Art Unit: Unknown

Examiner: Unknown

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
AD	SEB	Berman, et al., "Content and organization of the human Ig V <sub>H</sub> locus: definition of three new V <sub>H</sub> families and linkage to the Ig C <sub>H</sub> locus" (1988) <i>EMBO J.</i> 7:727-738.
AE		Burke, et al., "Cloning of Large Segments of Exogenous DNA into Yeast by Means of Artificial Chromosome Vectors" (1987) <i>Science</i> 236:806-812.
AF		Garza, et al., "Mapping the <i>Drosophila</i> Genome with Yeast Artificial Chromosomes" (1989) <i>Science</i> 246:641-646.
AG		Brownstein, et al., "Isolation of Single-Copy Human Genes from a Library of Yeast Artificial Chromosome Clones" (1989) <i>Science</i> 244:1348-1351.
AH		Sakano, et al., "Identification and nucleotide sequence of a diversity DNA segment (D) of immunoglobulin heavy-chain genes" (1981) <i>Nature</i> 290:562-565.
AI		Tucker, et al., "Mouse IgA heavy chain gene sequence: Implications for evolution of immunoglobulin hinge exons" (1981) <i>Proc. Nat'l. Acad. Sci.</i> 78:7684-7688.
AJ		Blankenstein, et al., "Immunoglobulin V <sub>H</sub> region genes of the mouse are organized in overlapping clusters" (1987) <i>Eur. J. Immunol.</i> 17:1351-1357.
AK		Joyner, et al., "Production of a mutation in mouse En-2 gene by homologous recombination in embryonic stem cells" (1989) <i>Nature</i> 338:153-155.

Examiner:

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7/31/97

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R. KUCHERLAPATI, ET AL.  
  
Serial No. 08/031,801  
  
Filed: 15 March 1993

Art Unit: Unknown  
  
Examiner: Unknown

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
AL		Traver, et al., "Rapid screening of a human genomic library in yeast artificial chromosomes for single-copy sequences" (1989) <i>Proc. Nat'l. Acad. Sci.</i> 86:5898-5902.
AM		Pachnis, et al., "Transfer of a yeast artificial chromosome carrying human DNA from <i>Saccharomyces cerevisiae</i> into mammalian cells" (1990) <i>Pro. Nat'l. Acad. Sci.</i> 87:5109-5113.
AN		Brüggemann et al., "A repertoire of monoclonal antibodies with human heavy chains from transgenic mice" (1989) <i>Proc. Nat'l. Acad. Sci.</i> 86:6709-6713.
AO		Brüggemann et al., "Construction, Function and Immunogenicity of Recombinant Monoclonal Antibodies" (1990) <i>Behring Inst. Mitt.</i> 87:21-24.
AP		Brüggemann et al., "Human antibody production in transgenic mice: expression from 100 kb of the human IgH locus" (1991) <i>Eur. J. Immunolog.</i> 21:1323-1326.
AQ		Albertsen et al., "Construction and characterization of a yeast artificial chromosome library containing seven haploid human genome equivalents" (1990) <i>Proc. Nat'l. Acad. Sci.</i> 87:4256-4260.
AR		Pavan et al., "Modification and Transfer into an Embryonal Carcinoma Cell Line of a 360-Kilobase Human-Derived Yeast Artificial Chromosome" (1990) <i>Mol. and Cell. Biol.</i> 10(8):4163-4169.

Examiner:

Date Considered:

2/3/92

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In the Application of

R. KUCHERLAPATI, ET AL.

Serial No. 08/031,801

Filed: 15 March 1993

Art Unit: Unknown

Examiner: Unknown

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
AS	SEJ	Gnirke et al., "Cloning and <i>in vivo</i> expression of the human GART gene using yeast artificial chromosomes" (1991) <i>EMBO Journal</i> 10(7):1629-1634.
AT		Eliceiri et al., "Stable integration and expression in mouse cells of yeast artificial chromosomes harboring human genes" (1991) <i>Proc. Nat'l. Acad. Sci.</i> 88:2179-2183.
AU		Huxley et al., "The Human HPRT Gene on a Yeast Artificial Chromosome Is Functional When Transferred to Mouse Cells by Cell Fusion" (1991) <i>Genomics</i> 9:742-750.
AV		Mortensen et al., "Production of Homozygous Mutant ES Cells with a Single Targeting Construct" (1992) <i>Mol. and Cell. Biol.</i> 12(5):2391-2395.
AW		Davies et al., "Targeted alterations in yeast artificial chromosomes for inter-species gene transfer" (1992) <i>Nucl. Acids Res.</i> 20:2693-2698.
AX		Zachau, "The Human Immunoglobulin $\kappa$ Locus and Some of its Acrobatics" (1990) <i>Biol. Chem.</i> 371:1-6.
AY		Matsuda et al., "Structure and physical map of 64 variable segments in the 3' 0.8-megabase region of the human immunoglobulin heavy-chain locus" (1993) <i>Nature Genetics</i> 3:88-94.

Examiner:

*J. J. [Signature]*

Date Considered:

7/31/92

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### In the Application of

R. KUCHERLAPATI, ET AL.

**Serial No. 08/031,801**

Filed: 15 March 1993

**Art Unit: Unknown**

**Examiner:** Unknown

**OTHER DOCUMENTS** (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desiq.	Examiner's Initials
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**AZ**

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Shin et al., "Physical map of the 3' region of the human immunoglobulin heavy chain locus: clustering of autoantibody-related variable segments in one haplotype" (1991) *EMBO* 10:3641-3645

**Examiner:**

**Date Considered:** 7/31/97

**EXAMINER:** Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

## SUPPLEMENTAL LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)



ATTY. DOCKET NO.

7639-033-999

SERIAL NO.

08/234,145

APPLICANT

Raju Kucherlapati, *et al.*

FILING DATE

April 28, 1994

GROUP

1804

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	N/A					

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
SCJ	AA WO 91/00906	01-24-91	PCT				
SCJ	AB EP 315,062	5-10-89					

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

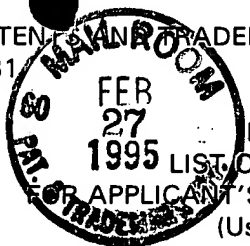
SCJ	AC	Capecchi <i>et al.</i> , 1989, "Altering the Genome by Homologous Recombination," <u>Science</u> <b>244</b> (16):1288-1292.
	AD	James <i>et al.</i> , 1987, "Human monoclonal antibody production: current status and future prospects," <u>Journal of Immunological Methods</u> <b>100</b> :5-40.
	AE	Bruggemann <i>et al.</i> , 1991, "Human antibody production in transgenic mice: expression from 100db of the human IgH locus," <u>European Journal of Immunology</u> <b>21</b> :1323-1326.
	AF	Lenz <i>et al.</i> , 1990, "Expression of heterobispecific antibodies by genes transferred into producer hybridoma cells," <u>Gene</u> <b>87</b> :213-218.
	AG	Mansour <i>et al.</i> , 1988, "Disruption of the proto-oncogene int-2 in mouse embryo-derived stem cells: a general strategy for targeting mutations to non-selectable genes," <u>Nature</u> <b>336</b> :348-352.

EXAMINER

DATE CONSIDERED

2/3/92

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Sheet 1 of 2

In the Application of

Raju Kucherlapati et al.

Serial No. 08/234,145

Filed: 28 April 1994

Art Unit: 1806

Examiner: Unassigned

U.S. PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/Subclass	(If appropriate) Filing Date
1.	SEY	4,959,313	25 Sept. 1990	Taketo		
2.	SEY	4,950,599	21 Aug. 1990	Bertling		

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GROUP 1806

FOREIGN PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/Subclass	(If appropriate) Filing Date
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OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

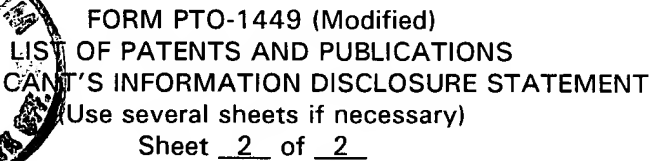
Ref. Desig.	Examiner's Initials	
3.	SEY	Yamaura et al., "Cell-Type-Specific and Regulated Expression of a Human $\gamma$ 1 Heavy-Chain Immunoglobulin Gene in Transgenic Mice", <i>Proc. Natl. Acad. Sci., USA</i> 83:2152-2156 (1986).
4.	SEY	Ayares et al., "Sequence Homology Requirements for Intermolecular Recombination in Mammalian Cells", <i>Proc. Natl. Acad. Sci. USA</i> 83:5199-5203 (1986).

Examiner:

Date Considered:

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Ref. Desig.	Examiner's Initials	
5.	SEJ	Brinster et al., "Introns Increase Transcriptional Efficiency in Transgenic Mice", <i>Proc. Natl. Acad. Sci., USA</i> 85:836-840 (1988).
6.		Kucherlapati, R., "Homologous Recombination in Mammalian Somatic Cells", <i>Prog. Nucleic Acid Res. Mol. Biol.</i> 36:301-310 (1989).
7.		Shimizu et al., "Immunoglobulin Double-Isotype Expression by Trans-mRNA in a Human Immunoglobulin Transgenic Mouse", <i>Proc. Natl. Acad. Sci., USA</i> 86:8020-8023 (1989).

Date Considered:

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MAR 4 1995

Examiner: Unassigned

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MAR 4 1995  
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Ref. Desig.	Examiner's Initials
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Miller, J. et al. Nature (1982) 295:428-430.

**Date Considered:**

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